

## **Interim Report for ARCP Project (2007)**

### **ARCP2006-07NMY-Koike**

---

#### **Part One (300 words)**

1. Project Title: International Integrated Water Data Access and Transfer in Asia (IIWaDATA)
2. Project Leaders: Dr. Toshio Koike, Professor, The University of Tokyo  
Chu Ishida, CEOS/JAXA, Japan
3. Collaborating Countries:  
Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Japan, Korea, Lao PDR, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, Uzbekistan, Vietnam
4. Non-technical summary:  
This project aims to (1) improve knowledge and enhance prediction of the Asian water cycle variation and its impacts on water resources through integrated observation systems and advanced data management and processing capabilities that will assure an easy access to relevant data in the proper format and to the desired extent to research communities, and (2) support informed decisions on water resources management and promote integrated water resources management (IWRM) strategies through providing specific tools and methods for transformation of observation data and scientific knowledge into information relevant for decision- and policy-makers.

#### **Part Two**

5. Project Objectives:
  - (i) Establishment of a mutual consensus among the participating countries that will define data sharing and exchanging policy and responsibilities for data processing, management and archiving;
  - (ii) Establishment of an observation convergence strategy in the Asian region;
  - (iii) Development/Adopting of effective tools for enhanced data collecting and data management including: software for data processing, quality control and format conversion, sophisticated database systems, and other tools;
  - (iv) Development/Adopting of advanced technologies for data integration and data dissemination including: data integration systems based on Internet technologies and capable of integrating data from diverse sources and various disciplines;
  - (v) Development/Adopting and implementation of specific tools and methods for transformation of observation data and scientific knowledge into water resources and risk management relevant information including: advanced downscaling methods to successfully introduce the impact of the global climate change on water cycle processes at the local scale, technologies for information fusion to link together various features of the water cycle and other aspects of the Earth system and thus provide sound information for decision makers, visualization tools to help to translate the scientific information, etc.
6. Relevance to the APN's Science and Policy Agendas:  
This project focuses on the Asian water cycle variability within the context of a global climate and the impact of this variability on water resources and thus is relevant to the "Climate" and "Use of resources" areas of the APN Science Agenda. While the data system targeted by the project will facilitate the research into the water cycle variation, an emphasis is put on the component that will enable improved transformation of the scientific knowledge to the decision-makers and will support the IWRM strategies for sustainable development of water resources.

Through its implementation strategy, which is based on establishing a consensus among participating countries that defines data sharing and exchanging policy and on enhanced interactions between scientists and policy- and decision-makers, the project is compliant with the APN Policy Agenda.

7. Work undertaken and results to date:

- (i) An International Task Team (ITT) consisting of a representative from each participating country and cooperating project has been established.
- (ii) The project has been associated with a broader and longer-term initiative – Asian Water Cycle Initiative (AWCI) that has been proposed at the 1<sup>st</sup> Asian Water Cycle Symposium (Tokyo, 2-4 November 2005) in recognition of the need for accurate, timely, long-term, water cycle information as a basis for sound and effective water resources and risk management in the Asian region. AWCI has been recognized by GEO as a GEOSS-supporting initiative (see Fig. 1).
- (iii) An ITT working session was held in Bangkok, 25 September 2006 to discuss the data policies and to outline the implementation strategy. The discussions resulted in proposing demonstration projects (DP) that would show the value of the global integrated data sets for advancing the research into the water cycle and for implementing IWRM strategies through the actual application of the available data to selected basins in participating countries. The in-situ data exchange and sharing policy for DPs was proposed. 32 basins were proposed for DPs.
- (iv) Work on inventory of the available data in the proposed basins and existing tools and methods relevant to the IIWaDATA (AWCI) objectives has been initiated.
- (v) Collaboration with related organizations and projects has been sought and established.
- (vi) The 2<sup>nd</sup> Asian Water Cycle Symposium was held in Tokyo, 9-10 January 2007 (<http://www.prime-intl.co.jp/awcs07/index.php>). The AWCI/IIWaDATA participating countries introduced their proposals for DPs. The baseline of the AWCI implementation plan and the data policy proposed on the ITT working session in Bangkok were discussed, modified and endorsed by the participants.

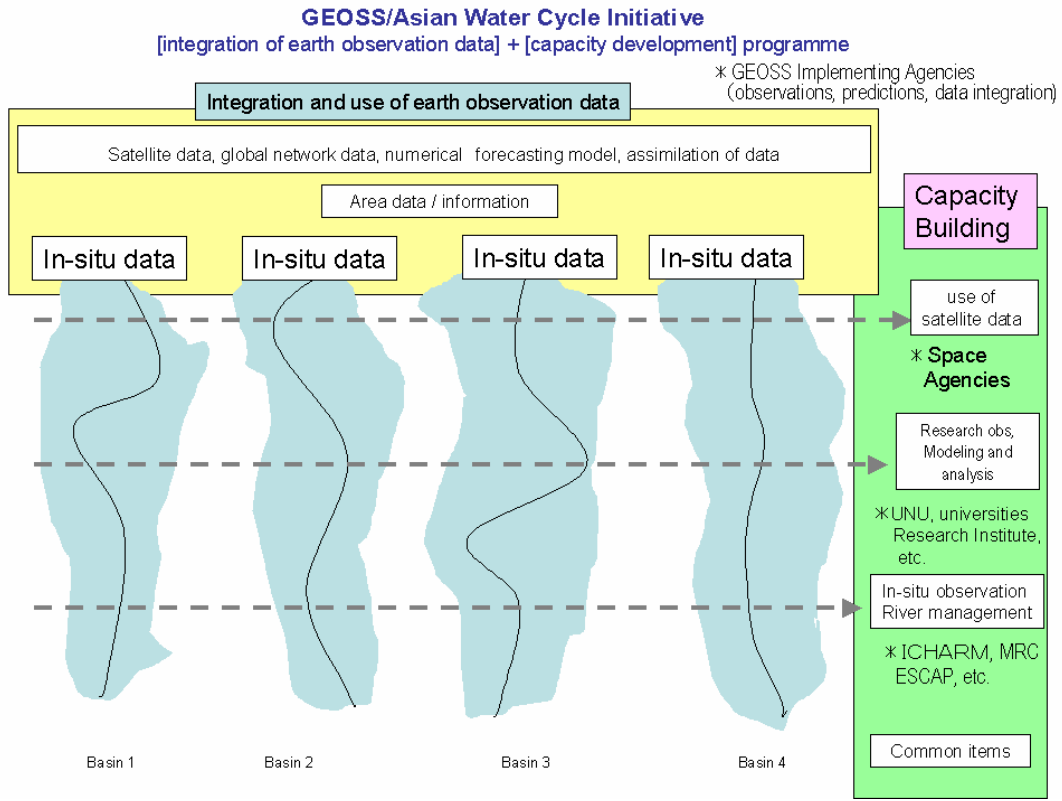
8. Self evaluation against project objectives:

We feel that the extended discussion on the baseline resulted in far better understanding of the objectives and the work that need to be carried out by participating countries. The great success is the agreement on the in-situ data exchange policy by participating countries. An important achievement is recognition of the project by national and international organizations and related existing projects and their interest in mutual cooperation. The achievement of these results has required longer discussions than anticipated and the association of the project with AWCI has also contributed to the initial phase taking a bit longer than initially planned. Even so, considering the objectives and originally proposed timeline, we can state that the project is progressing successfully.

9. Acknowledgments:

The project leaders and all collaborators sincerely thank Asia Pacific Network for the Global Change and the International START Secretariat for the financial and other forms of support without which the initiation and implementation of the proposed work would not have been possible. They also extend special thanks to Dr. Andrew Matthews, Chair, Steering Committee of APN, for his highly suggestive lecture at the 2<sup>nd</sup> Asian Water Cycle Symposium.

10. Appendix: Photographs, Diagrams, Graphs for APN (website) dissemination



**Figure 1: Framework of AWCI - IIWaDATA**



**Figure 2: 2<sup>nd</sup> Asian Water Cycle Symposium, Tokyo, 9-10 January 2007 (179 participants from 29 countries)**